ABSTRACT OF DISCLOSURE

A near field recording/reproducing optical head including a light unit which radiates light having a predetermined wavelength at a recording medium and detects light reflected from a recording side of the recording medium, and an optical waveguide probe installed at a slider which is raised above the recording medium by dynamic air pressure attendant upon the rotation of the recording medium. The optical waveguide probe includes an optical waveguide installed at the slider such that its one end faces the recording medium, and a self focusing layer formed of a nonlinear optical material, of which the refractive index changes according to the intensity of an incident light beam, at the end of the optical waveguide facing the recording medium. The optical waveguide transmits incident light from the light unit to the recording medium and transmits incident light reflected from the recording medium to the light unit. The self focusing layer focuses a light beam incident from the optical waveguide, thereby forming a light spot on the recording medium. Since the near field recording/reproducing optical head includes the self focusing layer formed of a nonlinear optical material at one end of the optical waveguide, it produces a very small beam having a size of a full wavelength or less overcoming the limit of diffraction, thereby performing recording at a high recording density even with light having a wavelength in a range between the red region and the near infrared region and considerably alleviating difficulty in manufacture and a degradation problem. In addition, since the self focusing layer has a high transmittance, recording can be performed with light having less power than in an existing near field recording optical head employing an optical fiber probe. Moreover, the self focusing layer has a small absorption coefficient so that a heating problem can be prevented.